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Modernisation of statistical production and services and managing for efficiency

Generic Activity Model for Statistical Organisations (GAMSO)

Note by the High-Level Group for the Modernisation of Statistical Production and Services

Summary

This note provides a description of the Generic Activity Model for Statistical Organisations and how it relates to other key standards for statistical modernisation. The key features of the other standards were presented to the Conference for information in 2014: the Generic Statistical Business Process Model (as document ECE/CES/2014/1), the Generic Statistical Information Model (ECE/CES/2014/2) and the Common Statistical Production Architecture (ECE/CES/2014/3).

The note is submitted to the Conference of European Statisticians for information.

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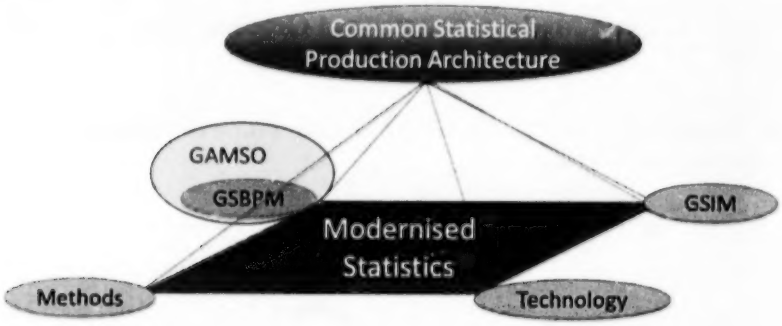
I. Purpose

1. The Generic Activity Model for Statistical Organizations (GAMSO) describes and defines the activities that take place within a typical statistical organization. It extends and complements the Generic Statistical Business Process Model (GSBPM) by adding additional activities needed to support statistical production. When GSBPM was developed, such activities were referred to as over-arching processes, and were listed, but not elaborated in any great detail. Over the years there have been several calls to expand the GSBPM to better cover these activities. GAMSO was therefore developed to meet these needs.

2. The following diagram, which is adapted from one in the vision paper of the High-Level Group for the Modernisation of Statistical Production and Services, shows the position of the GAMSO in relation to the other models and frameworks needed for statistical modernisation.

Figure 1

The relationship between GAMSO, GSBPM, Generic Statistical Information Model (GSIM) and the Common Statistical Production Architecture



3. Like GSBPM, GAMSO aims to provide a common vocabulary and framework to support international collaboration activities, particularly in the field of modernisation. While individual collaborations typically focus on modernising a particular aspect of production (as described by GSBPM), statistical production occurs within a broader context of corporate strategies, capabilities and support. GAMSO helps to place collaboration in the wider context.

4. Some expected uses of GAMSO are listed below. They show that the target audience for this model will vary according to use from top management to experts:

- As a basis for resource planning within a statistical organisation;
- As a basis for the measurement of costs of producing official statistics in a way that can be compared between organisations;
- As a tool to help assess the readiness of organisations to implement different aspects of modernisation, in the context of a proposed "Modernisation Maturity Model";
- To support risk management systems;

- To support the development and implementation of enterprise architectures, including components such as capability architectures;
- To help to measure and communicate the value of statistical modernisation activities across an organisation.

II. Origins

5. GAMSO draws heavily on two existing models:

- GSBPM v5.0 , which provides the contents of the Production activity area;
- The Statistical Network business activity model, which provides the basis for the Strategy and leadership, Capability management and Corporate support activity areas.

6. GAMSO is fully coherent with the GSBPM Version 5.0. It has introduced some noticeable changes in the definition of the scope of the Statistical Network business activity model areas while reusing at least 70% of its content. The reasons for the differences are:

- Incorporation of feedback from organisations that are not part of the Statistical Network, and that consider key activities to be missing or not given sufficient prominence in the Statistical Network business activity model;
- Full coherence with the GSBPM v5.0, which has been adopted as a cornerstone standard for the vision of standards-based modernisation promoted by the High-Level Group for the Modernisation of Statistical Production and Services. GSBPM was agreed after a lengthy and broad consultation process within the international statistical community, and has been adopted by over 50 statistical organisations worldwide. GAMSO is intended as an extension of GSBPM. The main consequence of this is that whilst the activity area Capability management builds on the Capability area of the Statistical Network business activity model, it is actually defined more narrowly in GAMSO to focus on the management of the development cycle of capabilities while the operational support of these capabilities is included in Corporate Support. In addition, in GAMSO, the accent is put on capabilities that are common to several statistical business processes and possibly shared across organizations.

III. Structure

7. GAMSO comprises three hierarchical levels. The top level comprises four broad activity areas: *Strategy and leadership, Capability management, Corporate support* and *Production*. The second level of *Strategy and leadership, Capability management* and *Corporate support* are sub-activities. The third level is a textual description of the second level. The *Production* activity area corresponds to the GSBPM v5.0 where it is described in detail. The over-arching GSBPM processes (quality and metadata management) have a cross-cutting nature and influence GAMSO in different layers.

Figure 2
Level 1 of GAMSO

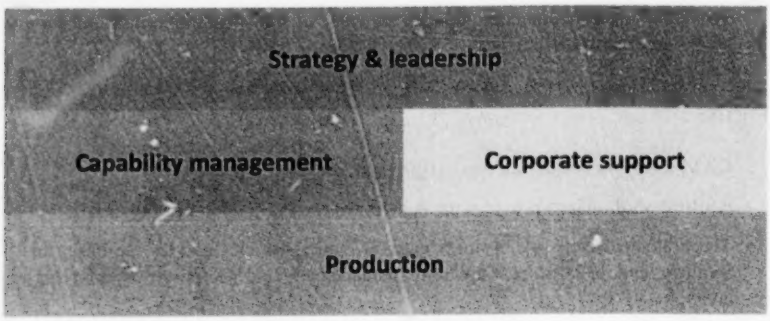
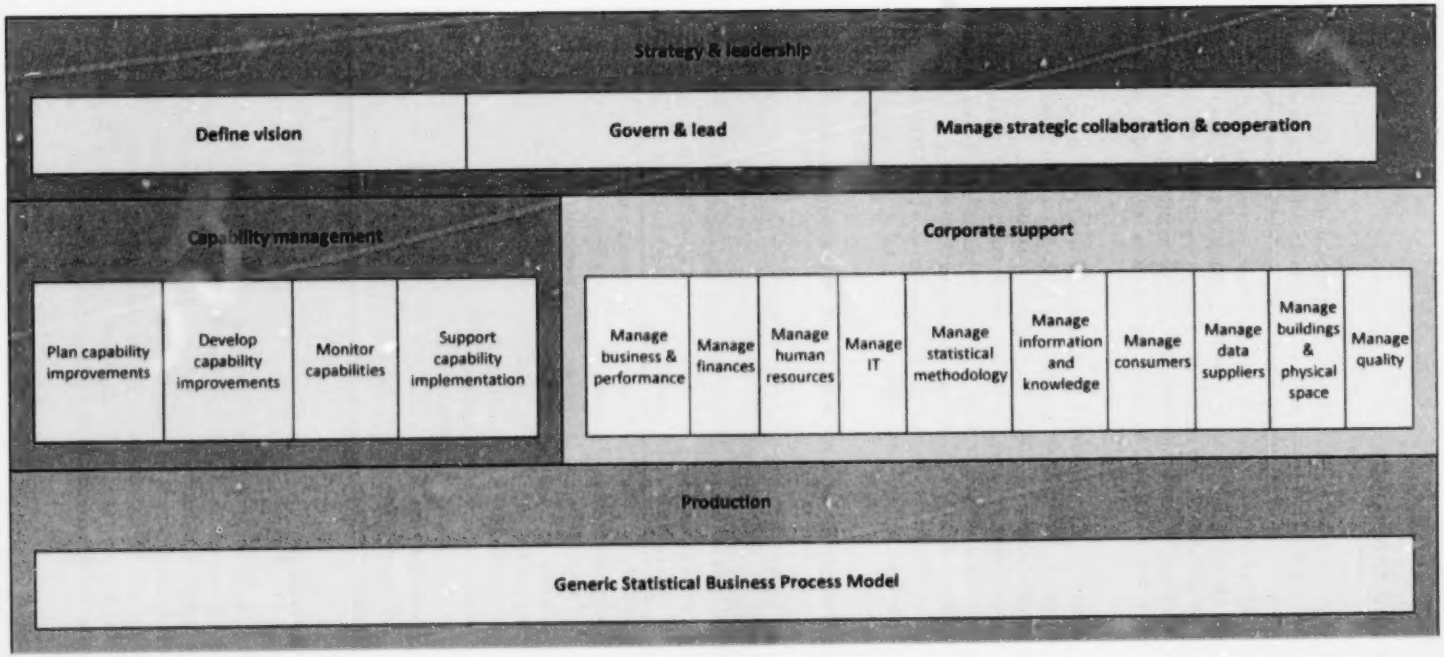


Figure 3
Levels 1 and 2 of GAMSO



III. Limitations and extensions

8. As GAMSO is designed to be a generic, international model, applicable across national, international, regional and local statistical organisations, it can never be a perfect fit for all cases. Some statistical organisations have additional functions, such as responsibility for administrative registers, or national geo-spatial standards and infrastructures. Some operate within strongly centralised contexts, whilst others are part of geographically or subject-matter, de-centralised systems, with different degrees of responsibility for coordination. Some organisations outsource certain activities, particularly supporting services, either to related statistical organisations, or to other government agencies.

9. GAMSO cannot cover all possibilities, so extensions might be needed for use within individual organisations. As for GSBPM, activities which are in the model, but which are not present within an organisation can simply be ignored, whilst additional activities can be added at the appropriate activity level. It is also likely that, in organisation-specific contexts, extra hierarchical levels will be needed. In order to maintain high-level coherence between local extensions and GAMSO, necessary extensions should be made at the lowest possible level. These local extensions should be kept identified as local so that comparisons across different organisations will still be possible.

Figure 4
Capability management activity area of GAMSO with local extensions (marked in red)

Capability management				
Plan capability improvements	**Develop capability improvements**	**Monitor capabilities**	**Support capability implementation**	**Organisation specific activity**
• Identify disruptions & capability improvements • Propose capability improvement projects • Manage capability improvement programmes	• Undertake background research • Develop detailed capability requirements • Design capability solution • Build & release capability solution • Manage capability development project	• Maintain capabilities • Promote capabilities • Organisation specific activity • Evaluate capabilities	• Support design • Support operations • Support use externally • Organisation specific activity	

A. Strategy and leadership

10. These are the high-level strategic activities that enable statistical organisations to deliver the products and services needed by governments and communities nationally and internationally. The activities influence, shape and drive future directions and investments through the development and consideration of high-level strategies to develop organisational capabilities and the statistical product and service portfolio. The over-arching GSBPM processes also need to be considered in this activity. The framework suggested here accounts for the specifics of each over-arching process.

11. The *Strategy and leadership* activity area is broken down into 3 sub-activities. These sub-activities are (as presented in Figure 5):

- Define vision
- Govern and lead
- Manage strategic collaboration and cooperation

Figure 5
Sub-activities of strategy and leadership

Strategy and leadership		
1.1	**1.2**	**1.3**
Define vision	Govern & lead	Manage strategic collaboration & cooperation

1. Define vision

12. These activities ensure that statistical organisations understand the environment in which they operate and the emerging issues they are confronted with, so that it is clear where they can provide independent, evidence-based information, as well as statistical standards and infrastructure, for use by governments and the broader community. Based on this, statistical organisations determine their high-level goals and directions, including the values which will guide them, so they set their statistical programmes accordingly. This also includes communicating the mission, values and expectations internally and externally, to lead and inspire staff and to increase government and community trust and confidence in the organisation and in official statistics in general. These include:

- Understand national and international directions and factors;
- Determine vision, mission and strategic goals;
- Determine organizational value proposition;
- Determine and communicate values and expectations;
- Create interest and awareness.

2. Govern and lead

13. These activities cover the development of strategies to achieve the goals and directions set under *1.1 Define vision*. They include identification and prioritisation of the statistical work programme, prioritisation of the capital investment programme, and the allocation of resources (capital and labour) to implement the agreed programmes defined in the statistical product and service and capability portfolios. These include:

- Develop strategies for achieving organizational goals;
- Prioritise capability portfolio;
- Prioritise statistical product and service portfolio;
- Define (annual) statistical programme;

- Allocate project and programme portfolio budgets;
- Build and maintain internal statistical and professional excellence;
- Ensure general coordination and alignment;
- Define general organisational policies;
- Publish policies, guidelines and normative documents.

3. Manage strategic collaboration and cooperation

14. These activities cover collaboration, cooperation and coordination with other statistical organisations and other external stakeholders. They can include coordination within a statistical system, which may be based on a geographical hierarchy of entities (local, regional, national, multi-national), or a functional split of responsibilities between organisations. They include activities undertaken to identify new opportunities for data exchange or integration. They provide the statistical community with opportunities to exchange knowledge, to improve statistical infrastructure and practices and to influence statistical standards. These activities contribute to the building and enhancing of shared statistical capabilities managed by partners, leading to increased statistical understanding and improved application and use. They include organisation and coordination of other organisations which produce official statistics as part of a national system. These include:

- Build and maintain strategic relations, nationally and internationally;
- Build and maintain external statistical excellence;
- Advance inter-agency and international collaborations;
- Secure support for statistical product and service and capability portfolio;
- Coordinate the national statistical system.

B. Capability[1] management

15. These activities support the successful development and monitoring of the capabilities that underpin an organisation's ability to conduct its business. They aim principally at promoting the re-use and sharing of infrastructure (statistical and technical), both inside the organisation and across organisations, thus facilitating harmonisation and coherence of statistical outputs.

16. This activity area is broken down into 4 sub-activities. The sub-activities are (as presented in Figure 6):

- Plan capability improvements;
- Develop capability improvements;
- Monitor capabilities;
- Support capability implementation.

[1] The Open Group Architecture Framework (TOGAF) defines a capability as ""An ability that an organisation, person, or system possesses. Capabilities are typically expressed in general and high-level terms and typically require a combination of organisation, people, processes, and technology to achieve."

Figure 6
Sub-activities of capability management

Capability management			
2.1	**2.2**	**2.3**	**2.4**
Plan capability improvements	Develop capability improvements	Monitor capabilities	Support capability implementation

1. Plan capability improvements

17. These activities aim at planning the best way forward to improve an organisation's capabilities. They require a thorough organisational view of change requirements, the prioritisation of options through an efficient, iterative approval process until a work programme for capability improvements is finalised. These activities further coordinate the planning and resourcing of cross-cutting / reusable capability improvement projects (both large and small), to ensure key improvement work is integrated across the organisation, with interdependencies understood and the resources optimized across the work programme. These activities also monitor the ongoing progress of the work programme and report to the relevant governance fora to ensure all required change requests occur in an efficient and effective manner. These include:

- Identify disruptions and capability improvements;
- Propose capability improvement projects;
- Manage capability improvement programmes.

2. Develop capability improvements

18. These activities develop approved improvement projects from the requirements stage through to their completion. The developers will undertake research, define the detailed requirements, coordinate the design and building, and finalize all aspects of the capabilities being developed, including their deployment for operational use. The activities mainly concern the development of capability improvements for multiple statistical business processes, including cases where capability improvements are developed through partnering with other statistical organisation or through implementing reusable infrastructure originally developed by others. Capability improvements in the context of a single statistical business process are included in the *Production* activity area. The activities include:

- Undertake background research;
- Develop detailed capability requirements;
- Design capability solution;
- Build and release capability solution;
- Manage capability development project.

3. Monitor capabilities

19. These activities aim at monitoring the organisation capabilities, ensuring the organisation reaps maximum benefits from investments. They involve maintaining capabilities, evaluating them or suggesting where improvements are required. Staff

members undertaking these activities effectively become the custodians / reference persons for the capabilities, taking responsibility for their fitness for purpose. These include:

- Maintain capabilities;
- Promote capabilities;
- Evaluate capabilities.

4. Support capability implementation

20. These activities provide the technical hands-on assistance required across the organisation to ensure that the capabilities are actually used in support of the development and implementation of statistical production. These activities also guide the successful operation of individual reusable business processes. When a capability is fully integrated in *Production*, its support is transferred to *Corporate Support*. These include:

- Support design;
- Support operations;
- Support use externally.

III. Corporate support

21. These activities cover the cross-cutting, functions required by the organisation to deliver its work programme efficiently and effectively.

22. This activity area is broken down into 10 sub-activities. The sub-activities are (as presented in Figure 7):

- Manage business and performance;
- Manage finances;
- Manage human resources;
- Manage information technology;
- Manage statistical methodology;
- Manage information and knowledge;
- Manage consumers;
- Manage data suppliers;
- Manage buildings and physical space;
- Manage quality.

Figure 7
Sub-activities of corporate support

Corporate Support									
3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10
Manage business & performance	Manage finances	Manage human resources	Manage IT	Manage statistical methodology	Manage information & knowledge	Manage consumers	Manage data suppliers	Manage buildings & physical space	Manage quality

1. Manage business and performance

23. These activities manage how the organisation conducts its business, including agreed changes to the business, in order to achieve planned outputs and outcomes. These include:

- Manage business performance;
- Manage change and risk;
- Manage legislation & compliance.

2. Manage finances

24. These activities cover the organisation's ongoing use of financial and accounting information to measure, operate and predict the efficiency and effectiveness of its activities, including procurement and contracts, in relation to the organisation's goals and objectives. Suppliers as referring to commercial provides of goods and services for the statistical organisation. These include:

- Maintain accounts (including assets and liabilities);
- Manage procurement and contracts;
- Manage suppliers of equipment, office supplies and services.

3. Manage human resources

25. These activities cover employee performance, recruitment, skills development, talent management and succession planning work. These include:

- Manage employee performance;
- Manage and develop skills;
- Manage talent;
- Manage recruitment;
- Ensure succession planning.

4. Manage IT

26. These activities cover coordination and management of information and technology resources and solutions. They include the management of the physical security of data. These include:

- Manage IT assets and services;
- Manage IT security;
- Manage technological change.

5. Manage statistical methodology

27. These activities cover the need to maintain the confidentiality and disclosure of information collected, maintained, or disseminated about individual persons, businesses or other entities. These include:

- Manage cross-cutting statistical methodologies;
- Manage confidentiality;
- Manage disclosure control.

6. Manage information and knowledge

28. These activities cover the ownership or custody of records, documents, information and other intellectual assets held by the organisation and the governance of information collection, arrangement, storage, maintenance, retrieval, dissemination and destruction. They also include maintaining the policies, guidelines and standards regarding information management and governance. These include:

- Manage documents and records, including destruction and archiving;
- Manage knowledge;
- Manage information standards and rights;
- Manage metadata and data.

7. Manage consumers

29. These activities cover the management of communication and exchanges between governmental or international institutions, the public, and other stakeholders in direct or indirect support of organisational services. They therefore deal with the relationships between statistical organisations and the public, including those via the media. This includes general marketing activities and dealing with non-specific consumer feedback. This also includes measures to educate and inform users so that they fully understand statistical outputs, and to promote and improve levels of statistical literacy in society in general. These include:

- Manage communications and media relations;
- Manage stakeholder consultations;
- Manage cross-product user support.

8. Manage data suppliers

30. These activities cover the relationships with sub-national governments and private entities that supply data for statistical activities. This includes cross-process burden

management, as well as topics such as profiling and management of contact information (and thus has particularly close links with statistical business processes that maintain registers. These include:

- Manage data sharing agreements;
- Manage data transfer.

9. Manage buildings and physical space

31. These activities cover maintenance of the building and allocation of physical space the organisation occupies. These include:

- Manage environmental, mechanical, and electrical needs;
- Manage arrangement of office space;
- Manage distribution of offices within space.

10. Manage quality

32. These activities cover developing and administering a quality framework and cross-cutting work with tools to assure quality, i.e. compliance with the quality framework that should cover quality linked to the organisational framework, processes and products. Such tools comprise quality indicators (including balancing quality components), user surveys, self-assessments, quality reviews or audits, certification and labelling of statistics. Quality documentation here refers to the organisational level and covers quality declarations, policies and relevant guidelines such as guidelines on handling of errors and revisions. These include:

- Manage quality framework;
- Manage quality assurance tools;
- Manage quality documentation.

IV. Production

33. The Production activities cover all steps necessary to manage, design and implement statistical production processes or cycles, including surveys, collections based on data from administrative or other sources and account compilations. They deliver the outputs approved under *Strategy and leadership*, utilizing the capabilities and resources built and managed under *Capability management* and *Corporate Support*.

34. The Production activities in GAMSO are those included in version 5.0 of the Generic Statistical Business Process Model. This means that GAMSO is by construction fully consistent with GSBPM v5.

35. The over-arching processes, both those that have a statistical component, and those that are more general, and could apply to any sort of organisation, that are mentioned in the GSBPM are not included in Production as they relate to other parts of GAMSO.